Definitions

Hydraulic Conductivity. A measurement of permeability. ( )

Oxidized Sediments. Sediments, characterized by distinct coloration, typically shades of brown, red, or tan, caused by the alteration of certain minerals in an environment with a relative abundance of oxygen. ( )

Perforated Well Casing. Well casing that has been modified by the addition of openings created by drilling, torch cutting, saw cutting, mechanical down-hole perforator, or other method. ( )

Reduced Sediments. Sediments, characterized by distinct coloration, typically shades of blue, black, gray, or green, caused by the alteration of certain minerals in an oxygen poor environment. ( )

Start Card. An expedited drilling permit process for the construction of 6" Single Family residential wells.

Transmissivity. The capacity of an aquifer to transmit water through its entire saturated thickness. ( )

Unusable Well. Any well that can not be used for its intended purpose or other beneficial use authorized by law. ( )

Waiver. A written request submitted to the Department and signed by the well driller and the well owner that proposes variance from the applicable construction standards.( )

02. Waivers. In unique cases, where the Director concludes that the ground water resources will be protected against waste and contamination, and the public health and safety are not compromised, a waiver of specific standards required by these rules may be approved prior to constructing, abandoning or modifying a well. The well driller and well owner shall jointly submit a detailed plan and written request identifying a specific Rule(s) proposed to be waived. The plan shall additionally detail well construction process that will be employed in lieu of complete Rule compliance. Prior to submittal, the plan and written request shall be signed by the well driller and well owner acknowledging concurrence with the request. The plan and request shall be submitted by facsimile, email, or letter. The Department will evaluate and respond to the request within ten (10) business days of receiving the request. If the waiver is approved the intent of the rules shall be served and all standards not waived shall apply. Waivers approved by the Department will not super cede requirements of other regulatory agencies without specific concurrence from that agency. Work activity related to a waiver request shall not proceed until a written or verbal approval is granted by the Department. Any verbal approval will be followed by a written approval. ( )

04. Casing.

c. Perforated Well Casing. Perforated well casing may be used in the construction or decommissioning of a well when such application does not violate any standards required by these Rules. ( )

07. **Use of Approved Sealing Materials and Required Annular Space.**

e. If a temporary casing has been installed, upon completion of the drilling, the annular space shall be filled with approved seal material and kept full while withdrawing the temporary casing. Bentonite chips should be used with caution when the annular space between a temporary casing and permanent casing is filled with water.( )

i. When attempts at removing a temporary casing are unsuccessful, the casing shall be sealed in place by a method approved by the department. The well driller shall notify the department whenever a temporary casing can not be removed and propose a plan to adequately seal the casing to prevent waste and contamination of the ground water. The plan shall detail how the casing will be sealed on the outside to a sufficient depth below land surface in addition to placement of any required formation seals through the interval at which the casing will remain. ( )

08. Sealing of wells.

b. Unconsolidated formations without confining layers of clay. When a water well is drilled and acquires water from an unconfined aquifer which is overlain with unconsolidated formations, such as sand and gravel without confining layers of clay, unperforated well casing shall extend to at least five (5) feet below the water table and be sealed to a depth not less than fifty-eight (58) feet. If the well depth is less than fifty-eight (58) feet, unperforated well casing shall extend to at least five (5) feet below the water table or eighteen (18) feet, whichever is greater and be sealed to a depth of at least eighteen (18) feet. ( )

i. The extensive (e.g. one hundred fifty (150) thick or more) unconsolidated, non-stratified, sand and gravel of the Rathdrum Prairie are characterized by extremely high transmissivity and hydraulic conductivity. Under these conditions, sealing wells to depths greater than eighteen (18) feet may not be additionally protective. When a water well is drilled within the boundaries of the Rathdrum Prairie, shown in figure X of these Rules, well casing shall extend to at least five (5) feet below the water table and be sealed to a depth not less than eighteen (18) feet. ( )

09. Sealing Artesian Wells

a. Unconsolidated Formations. When artesian water is encountered in unconsolidated formations, the production zone or open interval shall be limited to zones of like pressure, temperature, and quality. Water encountered in oxidized sediments shall not be comingled with water encountered in reduced sediments. Well casing shall extend

from land surface into the lower most confining layer above the production zone, and shall be sealed; ( )

i. From land surface to a depth of at least 58 feet and;

ii. Through all confining layer(s) and;

iii. A minimum of five (5) feet of seal material shall be placed into or through the lower most confining layer above the production zone; or

iii. Continuously from land surface and

iv. A minimum of five (5) feet of seal material shall be placed five (5) ft into or through the lowermost confining layer above the production zone.

If the well depth is less than fifty-eight (58) feet, the well shall be cased and sealed from land surface to the confining layer in direct contact with the production zone or to a depth of eighteen (18) feet, whichever is greater. ( )

b. Consolidated Formations. When artesian water is below a confining consolidated formation, well casing shall be installed and sealed; ( )

i. From land surface to a depth of at least fifty eight (58) feet and;

ii. If the consolidated formation is overlain by a permeable formation(s) and water will rise above the confining consolidated formation, well casing shall extend and be sealed at least five (5) ft into the confining consolidated formation.

If the well depth is less than fifty-eight (58) feet, the well shall be cased and sealed from land surface five (5) feet into the confining consolidated formation or to a depth of eighteen (18) feet, whichever is greater. ( )

Alternative methods for sealing wells

To accommodate for new technology and in consideration of the wide variety of drilling equipment used to construct wells, other methods of sealing wells not specifically addressed in these rules may be allowed. The Director may consider specific proposals for alternative methods of sealing on a case by case basis. Department approval or acceptance of such procedures shall not constitute a “waiver” of any requirements of these rules. In such cases, the well driller shall provide sufficient information for the Director to determine that the full intent of the sealing requirements will be satisfied if an alternative method is employed. If it is determined that a specific alternate method will provide protection of the ground water from waste and contamination, the Director may issue a statement of acceptance qualifying the use and implementation of such methods.( )

New table for Rule 025.23 "Disinfection and Decontamination

	Amount of Chlorine Needed Per 100 Feet of Water in Well		
Casing Diameter (in.)	Volume of water in casing per 100 ft. of water depth	Amount of 5.25% Sodium Hypochlorite (Unscented Laundry Bleach)	Amount of 65% Calcium Hypochlorite (Chlorine Granules)
6	147	2 ¼ cups	3 tbsp
8	261	4 cups	5 tbsp
10	408	6 ¼ cups	½ cup
12	588	9 cups	¾ cup
16	1044	1 gal	1 ¼ cup
Note: 1 gal = 4 qt = 8 pt = 16 cups; 1 cup = 16 tbsp			
Chlorine granules or tablets shall be dissolved and placed into the well as a solution.			
If another concentration of hypochlorite solution is used, the following equation should be used for calculating amounts. (Volume of water) X (0.005) X (16) = cups of hypochlorite % Hypochlorite (e.g. 50% = 50)			

045. DRILLING PERMIT REQUIREMENTS (RULE 45).

01. General Provisions. ( )~~(7-1-93)~~

a. ~~The owner of a well to be constructed, drilled, deepened or enlarged on or after July 1, 1987 shall obtain a drilling permit from the Director prior to construction or drilling of the well.~~Drilling permits are required pursuant to Section 42-235, Idaho Code, prior to construction of any well. (7-1-93)

~~**b.** The owner of a well under construction prior to July 1, 1987, for which the drilling equipment is at the site and construction is ongoing, shall not be required to obtain a drilling permit, provided that construction of the well was complete by August 1, 1987. The Director may extend the date for good cause. (7-1-93)~~

~~**c.** The Director may issue a drilling permit to the owner of a proposed well, to the driller employed to construct the well, or to the owner's representative. (7-1-93)~~

~~**d**~~**b.** Drilling permits will not be issued for construction of a well which requires another separate approval from the department, such as a water right permit, transfer, amendment or injection well permit, until the other separate permitting requirements have been met.~~approval has been given by the department. The Director may grant a waiver if he determines that the public interest will be served by an expedited approval.~~ (7-1-93)

~~**e**~~**c.** The Director may allow the use of a start card permit or give verbal approval to a well driller for the construction of ~~certain wells such as~~ single family domestic wells.~~ and stockwater wells which do not require other separate approvals from the department, provided the driller files the drilling permit and appropriate fee with the~~

~~Director within thirty (30) days of the verbal approval~~ Start cards must be received by the Department at least two office hours prior to commencing construction of the well. (7-1-93)

~~f~~d. The Director may give verbal approval to a well driller for the construction of a well for which other permitting requirements have been met, provided that the driller or owner has filed ~~files~~ the drilling permit application and appropriate fee~~. with the Director within thirty (30) days of the verbal approval.~~ (7-1-93)

~~g.~~e The Director will not give a verbal approval or allow the use of a start card permit for wells ~~construction~~ constructed ~~or drilling~~ in a designated ~~area~~ Area of ~~drilling~~ Drilling ~~concern~~Concern, Critical Ground Water Area, or Ground Water Management Area. (~~7-1-93~~)

~~**h.** Failure of the driller to submit a completed drilling permit and fee within the thirty (30) day period after receiving verbal approval to construct a well is cause for the Director to seek the penalties provided by statute and by these Rules. (7-1-93)~~

~~i~~f. ~~After the effective date of these Rules, a~~A well driller shall not construct, drill or modify any well until a drilling permit has been issued, or verbal approval granted~~is given~~. (7-1-93)

02. Effect of a Permit. (7-1-93)

a. A drilling permit authorizes the construction~~, drilling~~ or modification of a well in compliance with these Rules and the conditions of approval on the permit. ( )~~(7-1-93)~~

b. A drilling permit does not constitute a water right ~~permit~~, injection well permit or other authorization which may be required from the department ~~prior to actual well construction and does not authorize~~ authorizing use of water from ~~the~~ a well or discharge of fluids into ~~the~~ a well. (7-1-93)

c. A drilling permit may not be assigned from one owner to another or from one driller to another. (7-1-93)

d. A drilling permit authorizes the construction of one (1) well ~~(~~except for ~~group~~blanket monitoring well drilling permits.~~) unless other holes started under terms of the permit are properly abandoned and the department is advised of the abandonment.~~( )~~(7-1-93)~~

03. Exclusions.~~ (7-1-93)~~ ( )

~~**a.** Geotechnical borings for the purpose of mineral exploration or for the design of foundations for structures or for the design of dams and embankments~~ Holes or excavations that do not constitute a well for purposes of these ~~rule~~Rules and are not subject to the drilling permit requirements ~~but~~ shall be modified, constructed, ~~and~~ or decommissioned (abandoned) in accordance with minimum well construction standards. The Director may require decommissioning (abandonment) of holes constructed pursuant to Rule 045.03 in compliance with these rules when the use ceases or if the holes are

determined to contribute to waste or contamination of the ground water. The following are types of holes not considered wells: (7-1-93)~~(7-1-93)~~

a. Holes with total depth less than eighteen (18) feet. (4-5-00)

~~**b.** The Director may require abandonment of wells constructed pursuant to Rule 045.03.a. if the wells are determined to cause waste or contamination of the ground water.~~
~~(7-1-93)~~
b. Holes for collecting soil or rock samples, determining geologic properties, or mineral exploration or extraction, including gravel pits. (4-5-00)

~~**c.** Wells constructed pursuant to Rule Subsection 045.03.a. shall be abandoned in compliance with adopted rules when use of the wells cease. (7-1-93)~~

c. Holes for oil and gas exploration for which a permit has been issued pursuant to Section 47-320, Idaho Code. (4-5-00)

d. Holes constructed for de-watering building or dam foundation excavations. (4-5-00)

04. Converting a Hole Not Constructed as a Well for Use as a Well. A hole that was not constructed as a well pursuant to a drilling permit, if subsequently converted to obtain water, monitor water quantity or quality, or to dispose of water or other fluids, shall be reconstructed by a licensed driller in compliance with well construction standards and drilling permit requirements. (4-5-00)

~~04~~05. Fees. (7-1-93)

~~**a.** A drilling permit fee is not required for a well constructed and completed prior to July 1, 1987, provided the well is not deepened or the dimensions of the well are not increased on or after July 1, 1987.o (7-1-93)~~

~~**b**~~**a.** ~~The drilling permit fee for construction of a well for a single family domestic use, stockwater use, class V(c) heat pump injection associated with a single family domestic use or monitoring use or for any use with a rate of diversion of four one hundreths (0.04) cubic feet per second or less and for the storage of four (4) acre feet per year or less shall be ten ($10) dollars. (See IDAPA 37.03.03, "Rules for Construction and Use of Injection Wells" for the description of class V(c) injection wells).~~Drilling permit fees shall be as prescribed by Section 42-235, Idaho Code. ( ) ~~(7-1-93)~~

~~**c.** The Director may issue a blanket drilling permit for site specific monitoring programs prepared by a licensed engineer or licensed geologist as provided in Section 42-235, Idaho Code, upon submittal of a fifty dollar ($50) fee. (7-1-93)~~

~~**d.** The drilling permit fee for well uses which are not included in Rules Subsections 045.04.b. and 045.04.c. shall be one hundred dollars ($100). (7-1-93)~~

eb**.** The difference between the drilling permit fee required by ~~Rules Subsections 045.04.b. through 045.04.d.,~~Section 42-235 Idaho Code as applicable, shall be paid when an existing well constructed on or after July 1, 1987, for which the lower drilling permit fee was paid, is authorized by the Department for a use which would require the larger drilling permit fee. ~~This rule applies even though the existing well is not deepened or the dimensions of the well are not increased.~~ ~~(7-1-93)~~

~~**f.** A drilling permit fee will not be required for a new or additional use from an existing well constructed on or after July 1, 1987, when the drilling permit fee for the new or additional use is the same amount which was previously paid for construction of the well in connection with the existing use. (7-1-93)~~

046. -- 049. (RESERVED)

050. PENALTIES (RULE 50).

A person owning or controlling a well that allows waste or contamination of the state's ground water resources or causes a well ~~not~~ to meet ~~the construction standards provided in these~~ a lesser standard than required by these ~~rule~~Rules, is subject to the civil penalties as provided by statute. A driller who violates the foregoing provisions of these ~~minimum~~ well construction standards ~~rule~~Rules is subject to the ~~penalty~~ penalties ~~provisions specified in 42-238 and 42-238b, Idaho Code~~as provided by Statute. (7-1-93)

Overbore and Annular Space

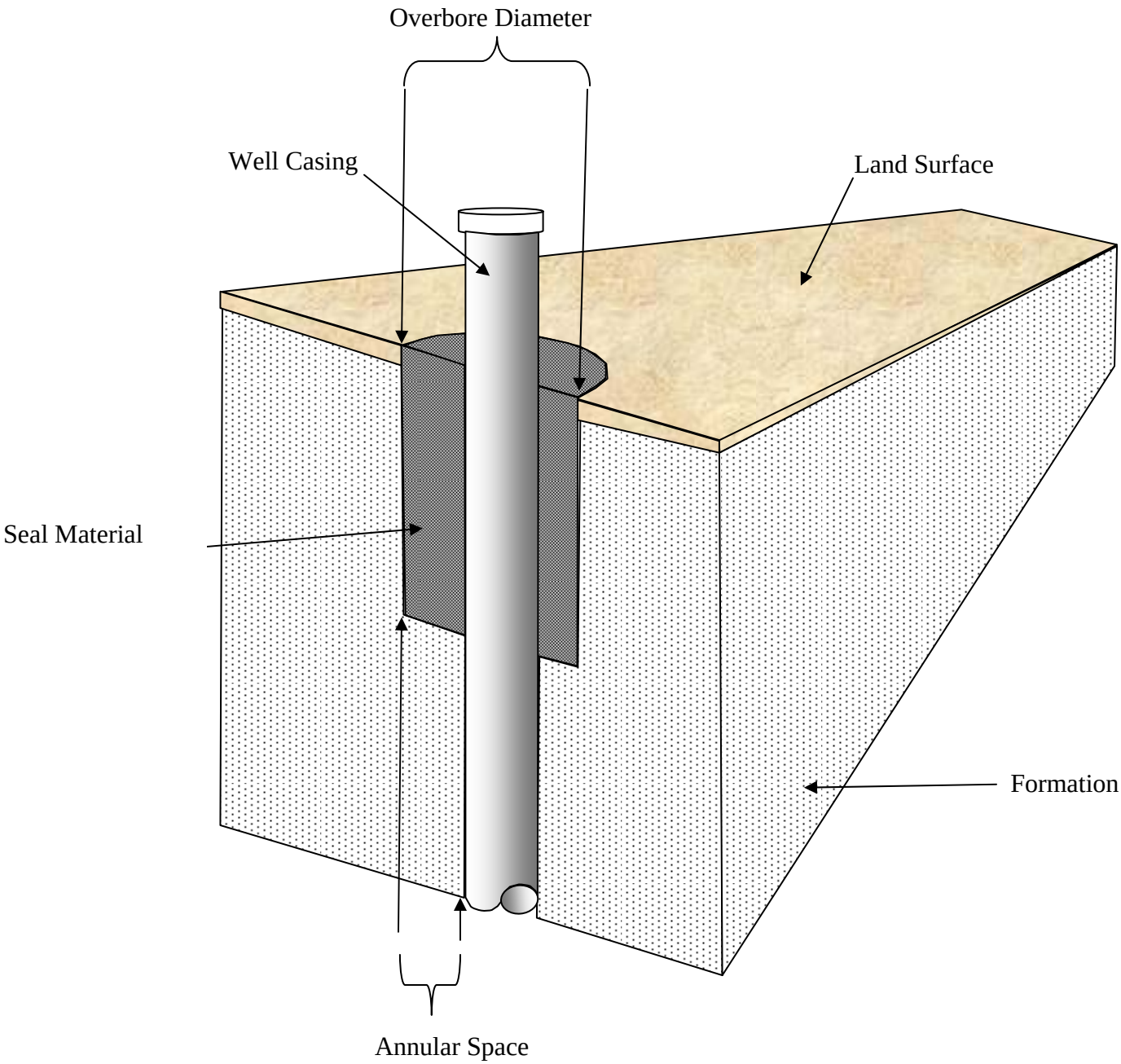


FIGURE 1
REQUIREMENTS FOR SEALING WELLS
IN CONSOLIDATED FORMATIONS

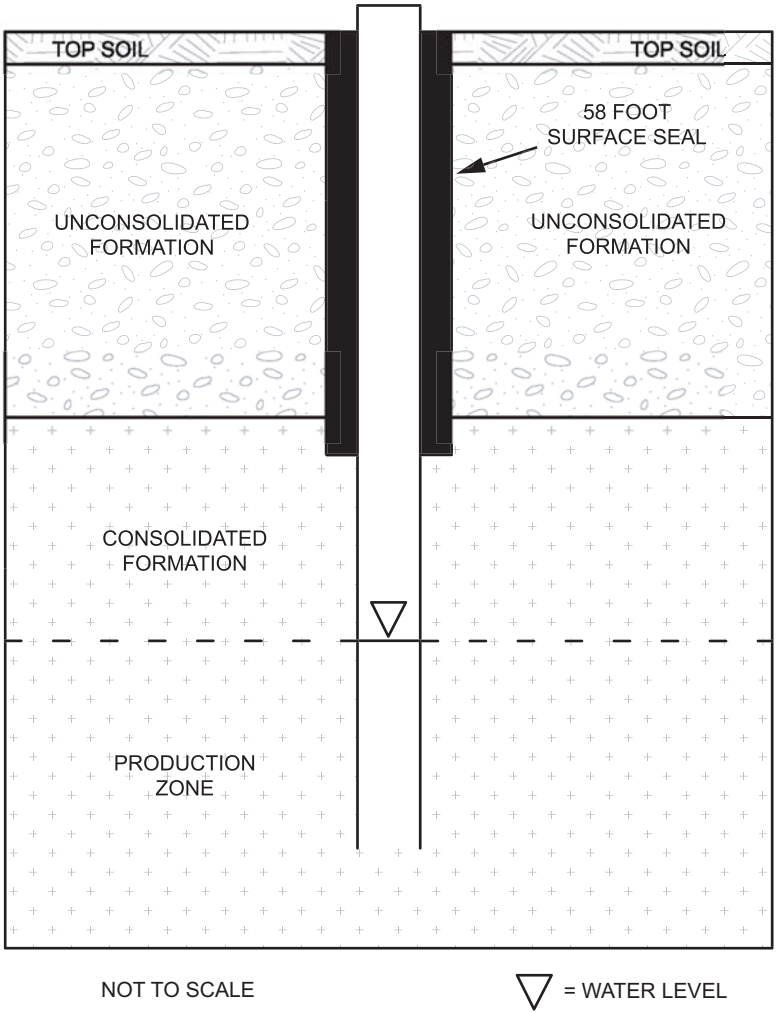


FIGURE 2
REQUIREMENTS FOR SEALING WELLS IN UNCONSOLIDATED FORMATIONS WITHOUT CONFINING LAYERS

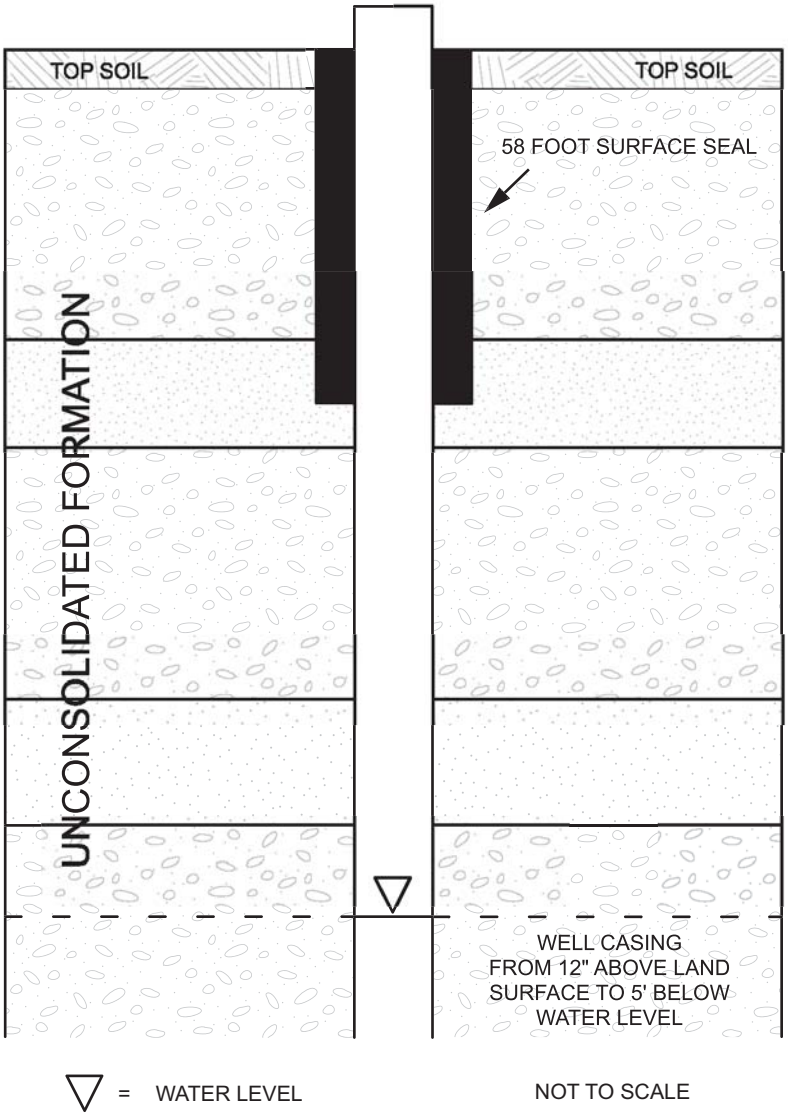


FIGURE 3
REQUIREMENTS FOR SEALING WELLS IN THE
RATHDRUM PRAIRIE SPECIAL DRILLING AREA

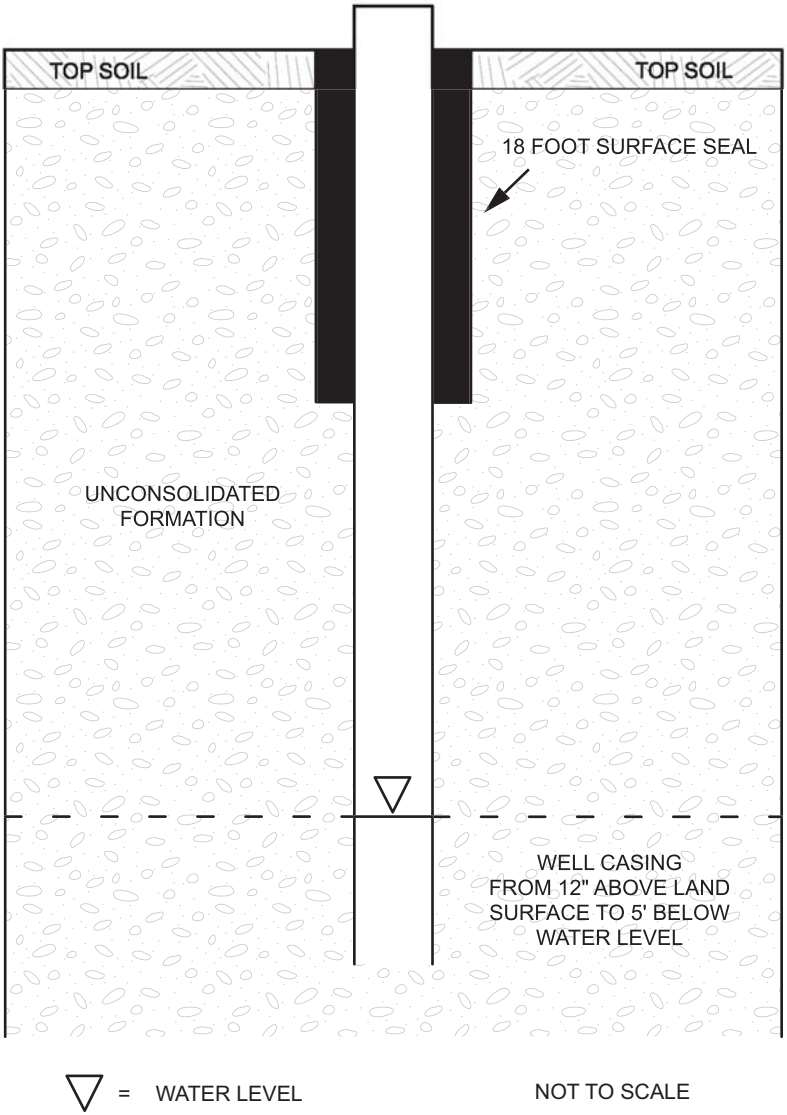


FIGURE 4
REQUIREMENTS FOR SEALING WELLS IN UNCONSOLIDATED FORMATIONS WITH CONFINING LAYERS

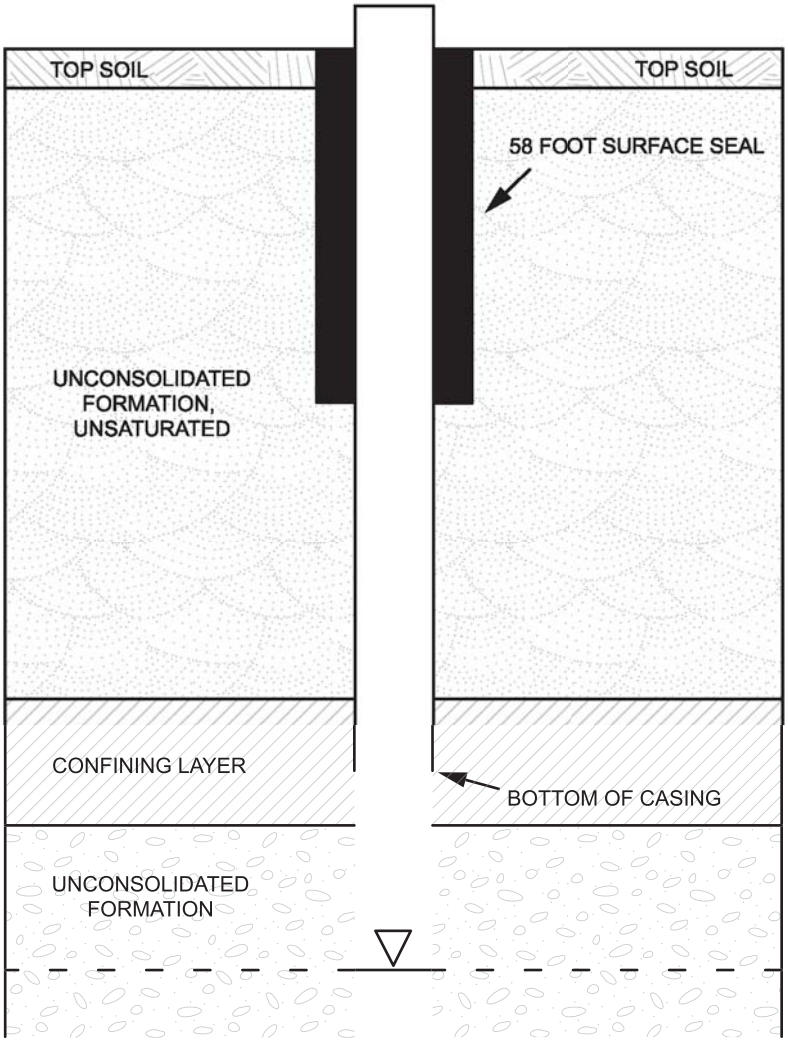


FIGURE 5
REQUIREMENTS FOR SEALING ARTESIAN WELLS

(EITHER OPTION WILL SATISFY THE REQUIREMENTS OF THE RULE)

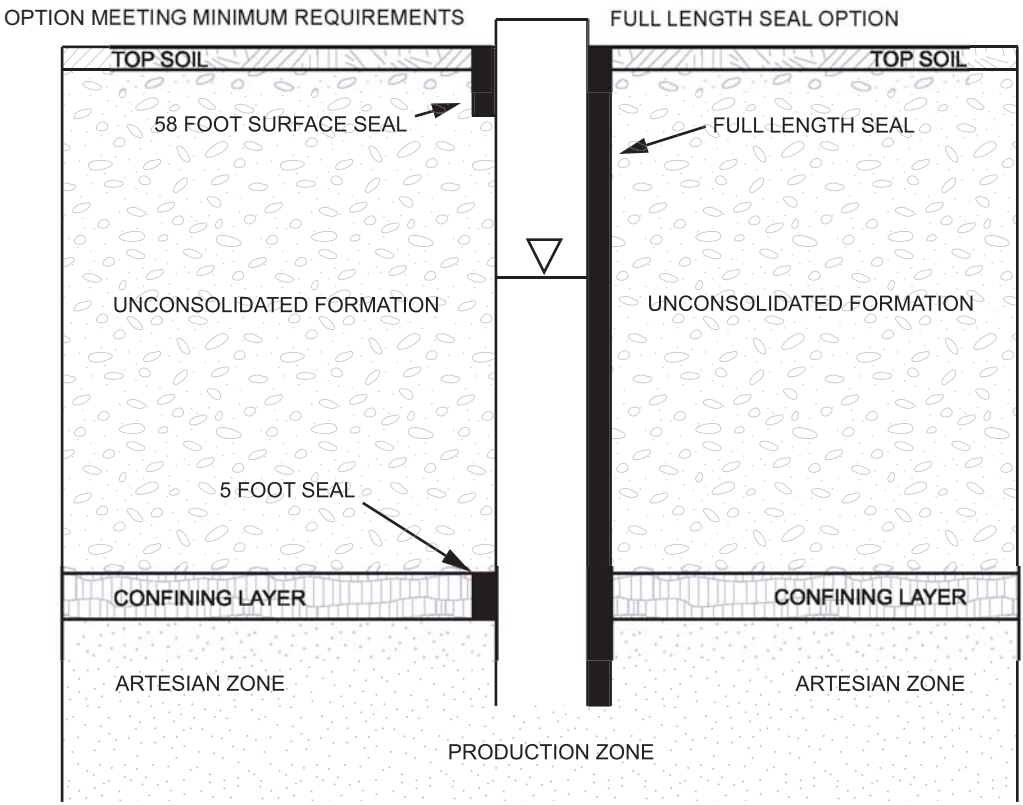
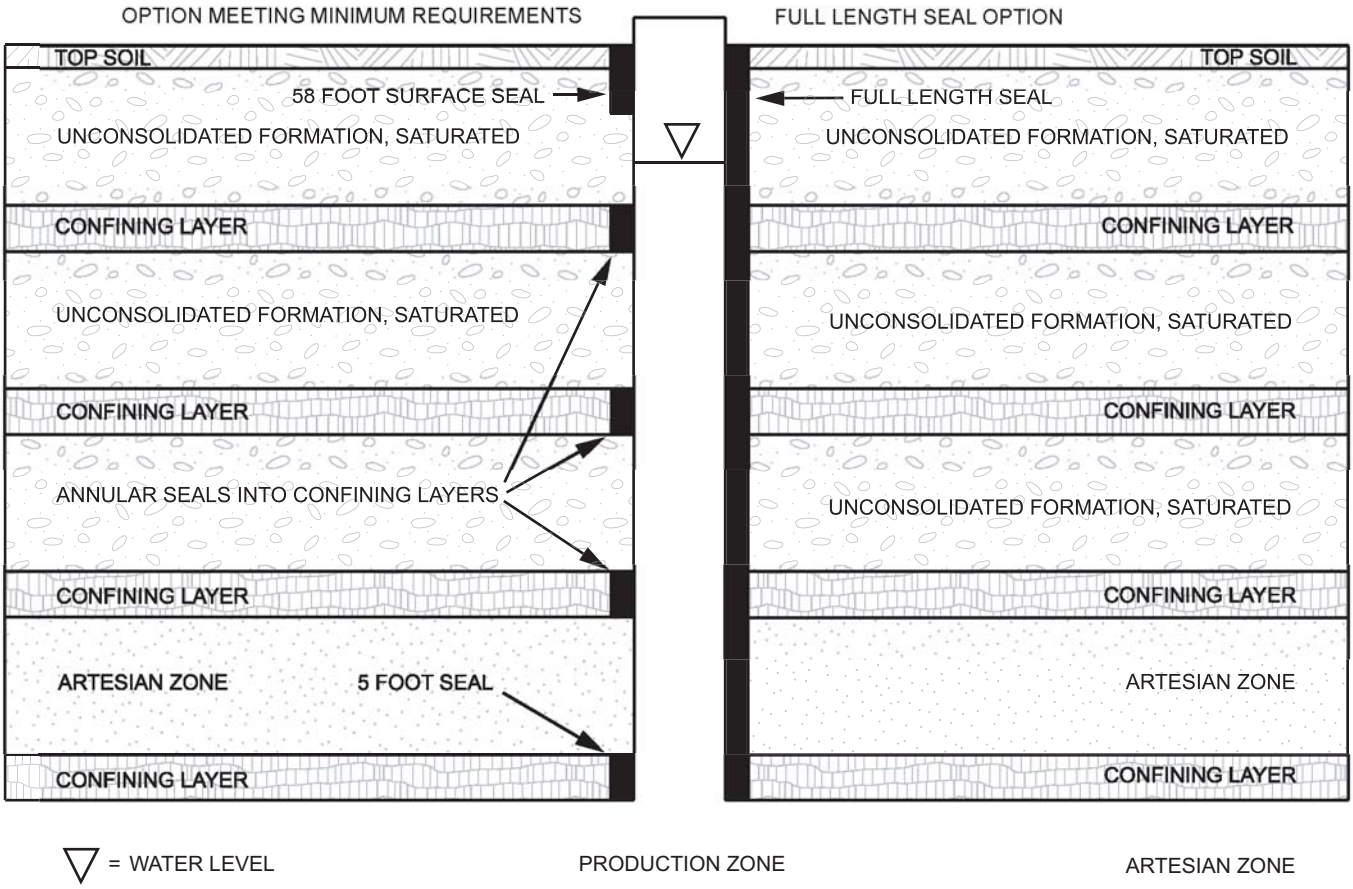


FIGURE 6
REQUIREMENTS FOR SEALING ARTESIAN WELLS

(EITHER OPTION WILL SATISFY THE REQUIREMENTS OF THE RULE)



NOT TO SCALE

FIGURE 7
REQUIREMENTS FOR SEALING WELLS IN CONSOLIDATED FORMATIONS WITH ARTESIAN HEAD ABOVE CONSOLIDATED FORMATION

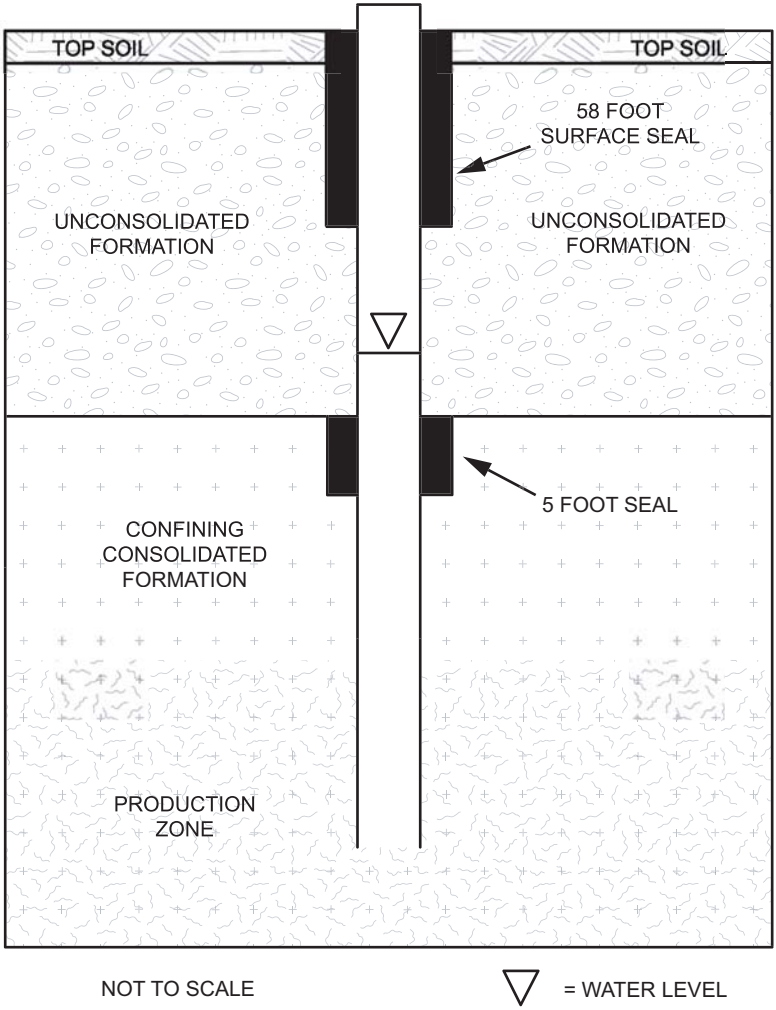


FIGURE 8
REQUIREMENTS FOR SEALING WELLS IN CONSOLIDATED FORMATIONS WITH ARTESIAN HEAD WITHIN CONSOLIDATED FORMATION